

Serial No. 10/087,301

Docket No.: 56912US002

Remarks

Applicant has editorially amended paragraph 0026. Withdrawn claim 1, pending claim 30 and withdrawn claim 51 have also been amended. Antecedent basis for the amendment to claims 1 and 30 can be found in the written description at, e.g., page 12, line 30 through page 13, line 12. Following entry of this amendment, claims 30 – 50 will be pending in this application with claims 1 – 29 and 51 – 57 having been withdrawn.

On May 21, 2003 restriction was requested from among the following Groups of claims:

- I. Claims 1 – 22, drawn to a method, classified in class 427, subclass 355.
- II. Claims 23 – 29, drawn to a method, classified in class 427, subclass 428.
- III. Claims 30 – 50, drawn to an apparatus, classified in class 118, subclass 118.
- IV. Claims 51 – 57 drawn to an apparatus, classified in class 118, subclass 244.

Applicant hereby confirms election of Group III, viz. claims 30 – 50, with traverse.

Reconsideration of the restriction requirement is requested. All of the claims involve improvements in filamentous article coating uniformity, and could be examined in a single application.

Double Patenting Rejection

Claims 30, 33, 34 and 36 – 38 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 63 – 65, 67 and 68 of co-pending Application Serial No. 09/757,955. '955 Application claims 63 – 65, 67 and 68 have been withdrawn due to a restriction requirement and are not currently being examined. Applicant does not agree that the devices of claims 30, 33, 34 and 36 – 38 are obvious over the devices of claims 63 – 65, 67 and 68, but will consider whether a terminal disclaimer should be filed if '955 Application claims 63 – 65, 67 and 68 are allowed prior to issuance of a patent on present claims 30, 33, 34 and 36 – 38.

**Rejection of Claims 30, 32, 33, 35,
42 – 45 and 48 under 35 USC §102(b)**

Claims 30, 32, 33, 35, 42 – 45 and 48 have been rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 2,570,173 (Von Kohorn), on grounds, *inter alia*, that:

Serial No. 10/087,301

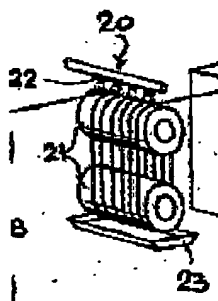
Docket No.: 56912US002

"Regarding Claims 30, 32, 33, Von Kohorn discloses a device comprising a coating station (20) that directly sprays a substantially uneven coating to at least some of the exposed portion of a filamentous article ... (Figure; column 4, lines 4 - 20)".

Applicant respectfully disagrees. The phrase "substantially uneven coating" is defined in applicant's written description at, e.g. paragraph 0023 as follows:

"The initially-applied coating is "substantially uneven". By this is meant that along a representative length (e.g., a 1 meter length) of the strand, the coating has voids or low spots whose minimum thickness is less than one-half the average coating thickness along that length."

Von Kohorn's aftertreating device 20 completely saturates a yarn with a treatment liquid by passing the yarn six times under a set of four spray nozzles 22:



Von Kohorn's device would not apply a substantially uneven coating to the yarn. Von Kohorn applies sufficient treatment liquid to require use of a catch trough 23 for excess applied treatment liquid (see e.g., column 4, lines 13-20). Von Kohorn also says that his yarn is "suitably treated on the aftertreating device 20 in order to effect the **substantially complete** regeneration, neutralization, desulfurization, and finishing of the bundle of elements" (column 5, lines 12-15, emphasis added). Clearly, Von Kohorn does not apply a "substantially uneven" coating to his yarn.

The Office Action also asserts (with respect to claim 33) that:

"Von Kohorn also discloses the coating station which is capable of periodically applying the coating liquid, and of changing the application period by turning the spray nozzles on and off."

Serial No. 10/087,301

Docket No.: 56912US002

Applicant respectfully disagrees. The Office Action does not indicate where Von Kohorn discloses "periodically applying the treatment liquid" or "turning the spray nozzles on and off", and applicant can find no such disclosure in Von Kohorn. Von Kohorn actually discloses a "continuous liquid aftertreating device" (see e.g., col. 4, line 5). To anticipate a claim, a reference must teach each and every element of the claim, in as complete detail as is recited in the claim, see MPEP §2131. Von Kohorn does not do so.

The Office Action also asserts that:

"Regarding Claims 35, 42 - 45 and 48, Von Kohorn discloses the rolls have the same period of contact with the filamentous article ... wherein a voided coating is applied to the filamentous article and converted by contact with the rolls to a void-free coating (Figure; column 4, lines 4 - 23)."

Applicant respectfully disagrees. The cited passages in Von Kohorn do not disclose applying a "voided coating" or conversion of such a coating "by contact with the rolls to a void-free coating". Applicant can find no disclosure in Von Kohorn of applying a voided coating or converting such a coating to a void-free coating.

Applicant accordingly requests withdrawal of the rejection of claims 30, 32, 33, 35, 42 - 45 and 48 under 35 USC §102(b) as being anticipated by Von Kohorn.

Rejection of Claims 30 - 33, 36 - 45 and 48 under 35 USC §102(b)

Claims 30 - 33, 36 - 45 and 48 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 2,867,108 (Severini), on grounds, *inter alia*, that:

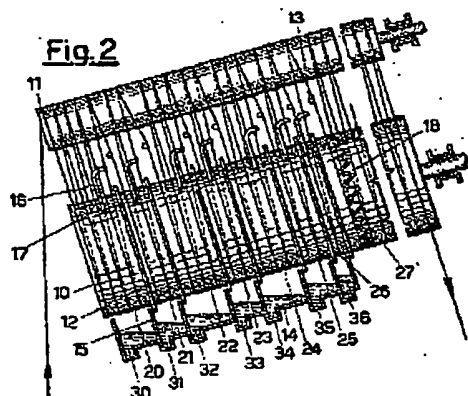
"Regarding Claims 30 - 33, Severini discloses a device comprising a coating station (16) that indirectly sprays by means of a shower nozzle or drips by means of a pipe (column 4, lines 43 - 48) a substantially uneven coating to at least some of the exposed portion of a filamentous article ... (Figures 1 and 2; column 4, lines 43 - 62 and column 5, lines 16 - 37);"

Applicant respectfully disagrees. Severini does not disclose a coating station that "drips by means of a pipe" and does not apply a "substantially uneven" coating. Severini saturates his yarn, employing "relatively abundant quantities of treatment liquors" that are "abundantly fed" to roller 10, forming a "relatively abundant" liquid film which wets the

Serial No. 10/087,301

Docket No.: 56912US002

uphill faces of each flange 12 and flows into the cells in trough 14 (see col. 5, lines 43 – 65 and Fig. 2):



The Office Action also asserts that:

"Severini also discloses the coating station which is capable of periodically applying the coating liquid, and of changing the application period by turning the spray nozzles on and off."

Applicant respectfully disagrees. The Office Action does not indicate where Severini discloses "periodically applying the treatment liquid" or "turning the spray nozzles on and off", and applicant can find no such disclosure in Severini. Severini actually discloses "continuous wet processing treatments" (see e.g., col. 9, lines 43 – 48).

The Office Action also asserts that:

"Regarding Claims 36 - 45 and 48, Severini discloses the rolls that do not have the same period of contact with the filamentous article ... wherein a voided coating is applied to the filamentous article and converted by contact with the rolls to a void-free coating (Figures 1 and 2; column 3, line 66 - column 4, line 11)."

Applicant respectfully disagrees. The cited passages in Severini do not disclose applying a "voided coating" or conversion of such a coating "by contact with the rolls to a void-free coating". The cited Fig. 2 in fact discloses application of excess treatment liquid that is collected in trough 14. Applicant can find no disclosure in Severini of applying a voided coating or converting such a coating to a void-free coating.

Applicant accordingly requests withdrawal of the rejection of claims 30 – 33, 36 – 45 and 48 under 35 USC §102(b) as being anticipated by Severini.

Serial No. 10/087,301

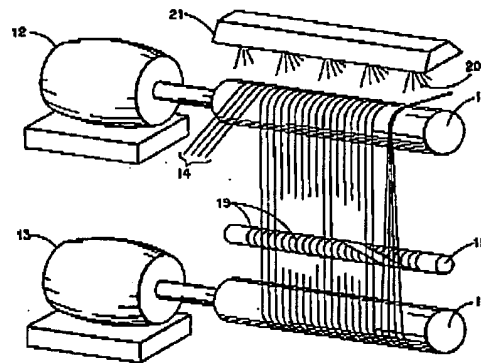
Docket No.: 56912US002

Rejection of Claims 30 – 33, 36 – 45 and 48 under 35 USC §102(b)

Claims 30 – 34, 36, 38, 39, 42 – 46 and 48 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,034,250 (Guertin), on grounds, *inter alia*, that:

"Regarding Claims 30 - 33, Guertin discloses a device comprising a coating station (21) that directly sprays or drips a substantially uneven coating to at least some of the exposed portion of a filamentous article ... (Figure; column 2, lines 56 - 66)"

Applicant respectfully disagrees. Guertin does not disclose a coating station that "drips a substantially uneven coating". Guertin saturates his yarn with a treatment liquid 20 by passing the yarn several times (for example, six times in Example 1) under a set of five spray nozzles in manifold 21:



The Office Action also asserts that:

"Guertin also discloses the coating station which is capable of periodically applying the coating liquid, and of changing the application period by turning the spray nozzles on and off."

Applicant respectfully disagrees. The Office Action does not indicate where Guertin discloses "periodically applying the treatment liquid" or "changing the application period by turning the spray nozzles on and off", and applicant can find no such disclosure in Guertin.

The Office Action also asserts that:

"Regarding Claims 34, 36, 38, and 39, Guertin discloses at least three rolls, wherein the rolls do not have the same period of contact with filamentous article;

Serial No. 10/087,301

Docket No.: 56912US002

wherein the rotational periods of the rolls are not periodically related; and wherein the filamentous article has at least five contacts with the rolls following application of the substantially uneven coating (Figure)."

Applicant respectfully disagrees. For the reasons already explained above, Guertin does not disclose application of a substantially uneven coating.

The Office Action also asserts that:

"Regarding Claims 42 - 46 and 48, Guertin discloses the filamentous article ... wherein a voided coating is applied to the filamentous article and converted by contact with the rolls to a void-free coating (Figure; column 2, line 56 - column 3, line 15).

Applicant respectfully disagrees. The cited passages in Guertin do not disclose applying a "voided coating" or conversion of such a coating "by contact with the rolls to a void-free coating". Applicant can find no disclosure in Guertin of applying a voided coating or converting such a coating to a void-free coating.

Applicant accordingly requests withdrawal of the rejection of claims 30 - 34, 36, 38, 39, 42 - 46 and 48 under 35 USC §102(b) as being anticipated by Guertin.

**Rejection of Claim 31 under
35 USC §§102(b)/103(a) and Von Kohorn**

Claim 31 was rejected under 35 USC §102(b) as anticipated by or, in the alternative, under 35 USC §103(a) as obvious over Von Kohorn, on grounds that:

"Von (Kohorn) discloses using a coating station (20). The sprayers of the coating station are considered capable of dripping an uneven coating to at least some of the exposed portion of a filamentous article. In any event, it would have been obvious to use dripping means to conserve coating material and prevent excess coating material from being wasted in the coating area by spraying."

Applicant respectfully disagrees. As noted above, Von Kohorn discloses a "continuous liquid aftertreating device". Von Kohorn does not disclose or suggest "dripping an uneven coating". Capability is not the issue; although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so", see MPEP §2143.01. As is typical in the coating arts, Von

Serial No. 10/087,301Docket No.: 56912US002

Kohorn applies excess coating liquid. Doing so avoids the risk of incomplete yarn saturation. Von Kohorn does not provide any suggestion or motivation to "prevent excess coating material from being wasted in the coating area by spraying" and would not need to do so. Von Kohorn uses catch trough 23 to collect and if need be recirculate excess treating liquid. Applicant accordingly requests withdrawal of the rejection of Claim 31 under 35 USC §102(b) as anticipated by or 35 USC §103(a) as obvious over Von Kohorn.

**Rejection of Claim 31 under
35 USC §§102(b)/103(a) and Guertin**

Claim 31 was also rejected under 35 USC §102(b) as anticipated by or, in the alternative, under 35 USC §103(a) as obvious over Guertin, on grounds that:

"Guertin discloses using a coating station (21). The sprayers of the coating station are considered capable of dripping an uneven coating to at least some of the exposed portion of a filamentous article. In any event, it would have been obvious to use dripping means to conserve coating material and prevent excess coating material from being wasted in the coating area by spraying."

Applicant respectfully disagrees, for essentially the same reasons as indicated above with respect to Von Kohorn. Guertin does not show whether he uses a catch trough, but as shown in Von Kohorn and in Severini such catch troughs appear to be conventionally employed in yarn treatment. Applicant accordingly requests withdrawal of the rejection of Claim 31 under 35 USC §102(b) as anticipated by or 35 USC §103(a) as obvious over Guertin.

Rejection of Claim 47 under 35 USC §103(a)

Claim 47 was rejected under 35 USC §103(a) as being unpatentable over Guertin as applied to claim 30 above, in view of U.S. Patent No. 4,059,068 (Guillermin et al.), on grounds that:

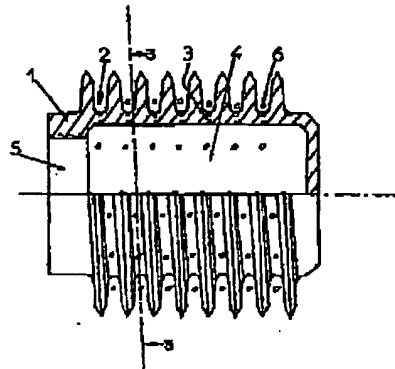
"Guertin discloses all the limitations of Claim 30, but does not specifically disclose all of the rolls to have grooves. However, Guillermin et al. teaches using grooved rolls for treatment of filamentary products (column 1, lines 37 - 43). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use grooves for all the rolls of the treatment apparatus to reduce

Serial No. 10/087,301

Docket No.: 56912US002

friction (column 1, line 39) and to place the filamentary product in a desired location."

Applicant respectfully disagrees. Guertin does not disclose "all the limitations of claim 30" for the reasons indicated above. For example, Guertin does not apply a substantially uneven coating to a filamentous article. Guillermin et al. do not cure Guertin's deficiencies. Guillermin et al. describe a grooved cylinder 1 whose helical groove 2 has orifices 3 for distributing fluid under sufficient pressure to suspend a yarn 6 that makes multiples passes through groove 2:



This would saturate the yarn with the supplied fluid, and is said by Guillermin et al. to avoid non-uniform treatment of the yarn (see e.g., col. 1, lines 23 – 34). Applicant accordingly requests withdrawal of the rejection of claim 47 under 35 USC §103(a) as being unpatentable over Guertin in view of Guillermin et al.

Rejection of Claims 49 and 50 under 35 USC §103(a)

Claims 49 and 50 were rejected under 35 USC §103(a) as being unpatentable over Guertin or Von Kohorn or Severini as applied to claim 30 above, in view of U.S. Patent No. 5,449,525 (Lundberg et al.), on grounds that:

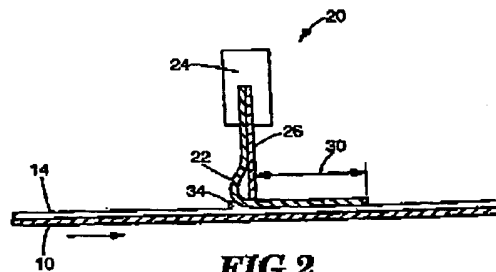
"Guertin, Von (Kohorn), and [Severini] each disclose all the limitations of Claim 30, but do not specifically disclose the coating to be converted to have an average caliper from 1 to about 5 micrometers. However, one in the art would know how to coat a filamentary material to have an average caliper from 1 to about 5 micrometers as shown by Lundberg et al. (column 10, lines 41 - 44). Therefore it would have been obvious to one of ordinary skill in the art at the time of the

Serial No. 10/087.301

Docket No.: 56912US002

invention to coat a filamentary material to have an average caliper from 1 to about 5 micrometers since it is well known in the art how to coat in the above mentioned range of coating thicknesses."

Applicants respectfully disagree. Guertin, Von Kohorn and Severini do not "disclose all of the limitations of claim 30" for the reasons indicated above. Lundberg et al. do not cure their deficiencies. Moreover, Lundberg et al. do not coat filamentous articles. Lundberg et al. smooth a coating 14 on a magnetic tape web 10 using a flexible blade 22:

**FIG.2**

The Office Action does not explain how Lundberg et al.'s coated web smoothing blade would be applicable to filamentous article coating. A person having ordinary skill in the art would not look to Lundberg et al. for guidance on coating filamentous articles. Applicants accordingly request withdrawal of the rejection of Claims 49 and 50 under 35 USC §103(a) as being unpatentable over Guertin or Von Kohorn or Severini, in view of Lundberg et al.

Conclusion

The cited references do not show or suggest applicant's claimed devices. Applicant requests reconsideration and withdrawal of the rejections and passage of the application to the issue branch. Applicant's undersigned attorney will contact the Examiner following the filing of this amendment to arrange if need be for an in-person interview and the resolution of any unanswered questions.

Serial No. 10/087,301

Docket No.: 56912US002

Respectfully submitted on behalf of
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